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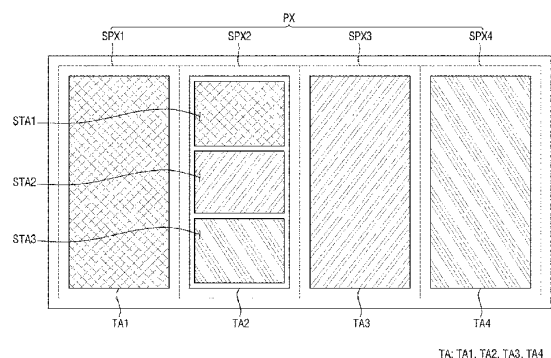
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(54) **DISPLAY DEVICE**

(57) A display device includes: sub-pixels including first and second electrodes extending in a first direction and spaced apart in a second direction and a plurality of light emitting elements on and electrically connected to the first and second electrodes; a bank layer extending around a region at where the light emitting elements are arranged; and a plurality of wavelength conversion layers and light transmitting layers in the region bounded by the bank layer. The sub-pixels include: a first sub-pixel including a first wavelength conversion layer overlapping the light emitting elements in the region bounded by the bank layer; and a second sub-pixel including a second wavelength conversion layer, a third wavelength conversion layer containing different wavelength conversion particles that the second wavelength conversion layer, and a first light transmitting layer, each of which overlaps some of the light emitting elements, in the region bounded by the bank layer.

FIG. 8





EUROPEAN SEARCH REPORT

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	WO 2022/025395 A1 (SAMSUNG DISPLAY CO LTD [KR]) 3 February 2022 (2022-02-03) * claims 1-24; figures 19-34 *	1-10	INV. H01L25/075 H01L33/50
X	EP 3 913 683 A1 (SAMSUNG DISPLAY CO LTD [KR]) 24 November 2021 (2021-11-24) * paragraph [0090] - paragraph [0095] * * figure 4 *	1-10	
X	WO 2022/019547 A1 (SAMSUNG DISPLAY CO LTD [KR]) 27 January 2022 (2022-01-27) * claims 1-20 *	1-10	
			TECHNICAL FIELDS SEARCHED (IPC)
			H01L
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 4 July 2023	Examiner But, Gabriela-Ileana
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	



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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

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☒ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

1-10

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).

**LACK OF UNITY OF INVENTION
SHEET B**

Application Number

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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-10

A display device comprising
a plurality of conversion layers, wherein a first sub-pixel
comprising a first wavelength conversion layer overlapping
the light emitting elements in the region bounded by the
bank layer; and
a second sub-pixel comprising a second wavelength conversion
layer, a third wavelength conversion layer, and a first
light transmitting layer, each of which overlaps some of the
light emitting elements, in the region bounded by the bank
layer,
wherein the second wavelength conversion layer and the third
wavelength conversion layer of the second sub-pixel contain
different wavelength conversion particles.

2. claims: 11-15

A display device comprising
a plurality of sub-pixels
wherein the second sub-pixel comprises:
a third electrode and a fourth electrode electrically
connected to the second light emitting element and spaced
apart from the first electrode and the second electrode in
the first direction, respectively; and
a fifth electrode and a sixth electrode electrically
connected to the third light emitting element and spaced
apart from the third electrode and the fourth electrode in
the first direction, respectively.

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

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5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

04-07-2023

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